Title (en)

METHOD FOR CHARGING AND DEPOSITING CHARGING MATERIAL IN SHAFT FURNACE, CHARGING MATERIAL SURFACE DETECTION DEVICE, AND METHOD FOR OPERATING SHAFT FURNACE

Title (de)

VERFAHREN ZUM BESCHICKEN UND DEPONIEREN VON BESCHICKUNGSMATERIAL IN EINEM SCHACHTOFEN, BESCHICKUNGSMATERIALOBERFLÄCHENERKENNUNGSVORRICHTUNG UND VERFAHREN ZUM BETRIEB EINES SCHACHTOFENS

Title (fr)

PROCÉDÉ POUR CHARGER ET DÉPOSER UN MATÉRIAU DE CHARGE DANS UN FOUR À CUVE, DISPOSITIF DE DÉTECTION DE SURFACE DE MATÉRIAU DE CHARGE ET PROCÉDÉ DE FONCTIONNEMENT D'UN FOUR À CUVE

Publication

EP 3115471 A4 20170816 (EN)

Application

EP 14884852 A 20141031

Priority

- JP 2014041909 A 20140304
- JP 2014150765 A 20140724
- JP 2014079114 W 20141031

Abstract (en)

[origin: EP3115471A1] A detection wave from a transmitting/receiving means is guided to the interior of a blast furnace via an antenna and a reflecting plate, and when a reflected wave from the surface of a loaded material is reflected by the reflecting plate and received by the transmitting/receiving means, the reflecting plate is rotated together with the antenna, or the reflecting plate is rotated additionally, and the surface profile of the loaded material is measured by scanning the surface of the loaded material in a linear manner or a planar manner during the turning of a chute or for each prescribed turn of the chute. A deposition profile is obtained on the basis of this surface profile and is compared to a predetermined theoretical deposition profile, and the chute is controlled so as to correct the error with respect to the theoretical deposition profile and then which new loaded material is introduced. The blast furnace is operated using this loading method.

IPC 8 full level

C21B 7/24 (2006.01); **C21B 5/00** (2006.01); **F27B 1/20** (2006.01); **F27D 3/08** (2006.01); **F27D 3/10** (2006.01); **F27D 21/00** (2006.01); **G01B 11/24** (2006.01); **G01B 15/04** (2006.01); **G01S 7/03** (2006.01); **G01S 13/08** (2006.01); **G01S 13/34** (2006.01); **G01S 13/88** (2006.01); **G01S 13/89** (2006.01)

CPC (source: EP KR US)

C21B 5/006 (2013.01 - EP US); **C21B 5/008** (2013.01 - EP KR US); **F27B 1/20** (2013.01 - EP KR US); **F27B 1/26** (2013.01 - KR); **F27B 1/28** (2013.01 - KR); **F27D 3/08** (2013.01 - EP US); **F27D 3/10** (2013.01 - EP KR US); **F27D 21/0028** (2013.01 - EP US); **F27D 21/04** (2013.01 - KR); **G01B 11/24** (2013.01 - EP US); **G01B 15/04** (2013.01 - EP US); **G01S 7/03** (2013.01 - EP US); **G01S 13/08** (2013.01 - US); **G01S 13/34** (2013.01 - EP US); **G01S 13/882** (2013.01 - EP US); **G01S 13/89** (2013.01 - EP US); F27D 2003/0004 (2013.01 - KR); F27D 2003/0012 (2013.01 - KR); F27D 2003/0062 (2013.01 - KR); F27D 2019/0075 (2013.01 - KR)

Citation (search report)

- [XI] JP 2011033619 A 20110217 - WIRE DEVICE KK
- See references of WO 2015133005A1

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DOCDB simple family (application)

EP 14884852 A 20141031; BR 112016020497 A 20141031; JP 2014079114 W 20141031; JP 2016506077 A 20141031; KR 20167024343 A 20141031; US 201415123917 A 20141031